

Application No.: 10/027,587Docket No.: 55468US002

Applicants respectfully disagree with the Patent Office that the claim language "wherein the processing aid is transient" is not clear. Applicants have stated in the present application that the processing aids can either be transient (i.e., volatile) or permanent (see page 19, line 25). Certain alkanes are transient (page 19, lines 25-26). Further, the Applicants have stated that the term transient indicates that substantially none of the processing aid remains in the adhesive composition after coating out of a solvent and removal of the solvent (page 19, line 27-29). Applicants submit that those skilled in the art recognize which materials are volatile and which are substantially absent after solvent coating and removal and therefore understand the claim language.

Accordingly, Applicants respectfully request that the above rejection of claim 30 be withdrawn.

### **§ 103 Rejections**

Claims 1, 2, 8-24, 27-34, 37-41, 44-48, and 52-63 were rejected under 35 USC § 103(a) as being unpatentable over Sherman et al. (WO 96/34028) in view of Flannigan (US 3,772,247). The Patent Office submits that Sherman et al. disclose a PSA comprising tackifying silicone resin and a polydiorganosiloxane polyureas copolymer and does not specifically disclose a silicone resin having no greater than about 1.5 wt-% Si-OH functional groups. The Patent Office submits that Flannigan discloses a PSA containing a silicone resin with a reduced silicon-bonded hydroxyl content of less than 1.0 percent by weight, and that it would have been obvious to one of ordinary skill in the art to have lowered the silicon-bonded hydroxy content as disclosed by Flannigan in the composition of Sherman et al.

Applicants' invention as claimed in one embodiment is a pressure sensitive adhesive comprising a silicone tackifying resin having no greater than about 1.5 wt-% Si-OH functional groups and a polydiorganosiloxane copolymer. As disclosed on page 8, line 30, and page 9, lines 14-15 of the application, the polydiorganosiloxane copolymer of the invention is a polymer where the polyisocyanate groups and the polyamine groups are connected by urea linkages.

In contrast, Sherman et al. disclose tackified compositions comprising a curable polydiorganosiloxane oligourea segmented copolymer, wherein the oligourea segmented copolymer

Application No.: 10/027,587Docket No.: 55468US002

has end groups that are reactive under free radical or moisture cure conditions. Such reactive end groups are described in Sherman et al. at page 12, lines 5-25, for Formula I at page 10, lines 12-14. Sherman et al. further disclose two ways of obtaining the desired degree of oligomerization: (1) control the isocyanate to amine ratio to obtain either isocyanate or amine capped oligomer, and (2) judiciously select the amount of monoamine or monoisocyanate endcapper with stoichiometric amounts of isocyanate and amine (see page 13, lines 10-14).

Additionally, as stated by the Examiner, Sherman et al. do not appear to specifically disclose a silicone resin having no greater than about 1.5 wt-% Si-OH functional groups. Thus, Sherman et al. do not teach or suggest either a polydiorganosiloxane copolymer or a silicone tackifying resin having no greater than about 1.5 wt-% Si-OH functional groups, or a combination of them.

Applicants respectfully do not agree with the Patent Offices' description of Flannigan. Flannigan does not disclose a pressure sensitive adhesive containing a silicone resin with a reduced silicon-bonded hydroxy content. Rather, Flannigan discloses organopolysiloxane resins which may be used as modifiers in siloxane paper treating (release coating) compositions, as intermediates in the preparation of other reactive resins and as cross-linking agents for room temperature curing elastomer forming compositions. The products of the examples of Flannigan are tested as release coatings for rubber-based pressure-sensitive adhesives, where the silicone resin is used to increase the release force between the silicone release coating and the pressure sensitive adhesive. In other words, a PSA mildly bonds to the release coating containing the silicone resin; the release coating does not otherwise have a bonding force. Release coatings are not the same as pressure sensitive adhesives and are typically specially formulated to have release properties to PSAs.

With respect to the results in Flannigan, the increase in the peel strength reported in Table 1 is a result of the added modifier to the release coating, and not due to any change in the pressure sensitive adhesive. Further, the peel strength values reported in Flannigan are consistent with values reported for release materials. In conclusion, Flannigan discloses using silicone resins in a release coating to modify the release coating so that PSAs have somewhat increased adhesion to release coatings, and not for use in PSAs. Accordingly, Applicants submit that Flannigan teaches

Application No.: 10/027,587

Docket No.: 55468US002

away from uses of such silicone resins in PSAs and thus, the requisite motivation to combine such teachings with those of Sherman et al. is lacking.

Further, even assuming the requisite motivation exists to combine the disclosure of Flannigan with that of Sherman et al., the combination as suggested by the Patent Office would not teach or suggest Applicants' invention as claimed. The resulting composition would contain curable polydiorganosiloxane oligourethane segmented copolymer, wherein the oligourethane segmented copolymer has end groups that are reactive under free radical or moisture cure conditions and silicone resin having low hydroxyl group content. This is clearly not the invention claimed in the present application. Accordingly, for the reasons stated above, Applicants respectfully request that the above rejection of claims 1, 2, 8-24, 27-34, 37-41, 44-48, and 52-63 be withdrawn.

#### Allowable Subject Matter

Applicants acknowledge that claims 3-7, 25, 26, 35, 36, 42, 43, and 49-51 have been deemed allowable by the Patent Office if rewritten in independent form including all limitations of the base claim and any intervening claims.

In view of the above remarks, Applicants respectfully request reconsideration of the claims and submit that the claims are in condition for allowance and request formal notice thereof. Examiner is invited to telephone the undersigned at the number below if Examiner believes that such a call would facilitate prosecution and allowance of the application.

Registration Number 39,594	Telephone Number 651/736-6935
Date 26 June, 2003	

Respectfully submitted,

By

Scott A. Bardell

Office of Intellectual Property Counsel  
3M Innovative Properties Company  
P.O. Box 33427  
St. Paul, Minnesota 55133-3427  
Facsimile: (651) 736-3833

FAX RECEIVED

JUN 27 2003

GROUP 1700